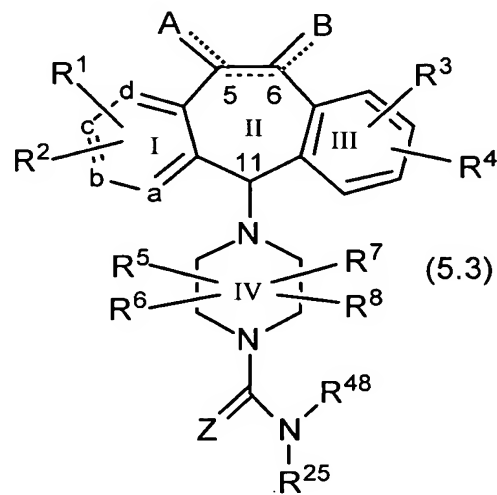
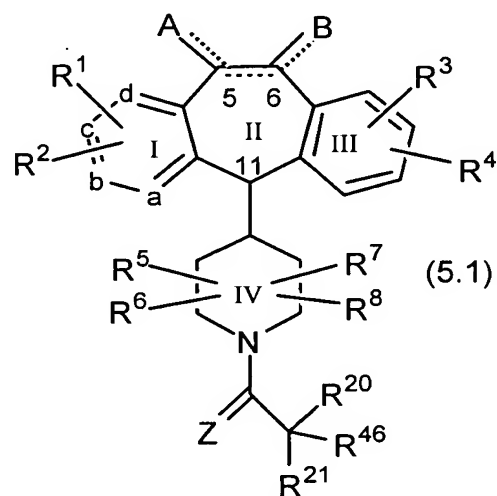


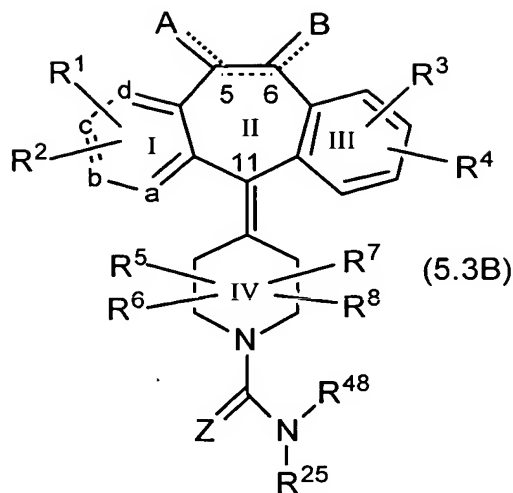
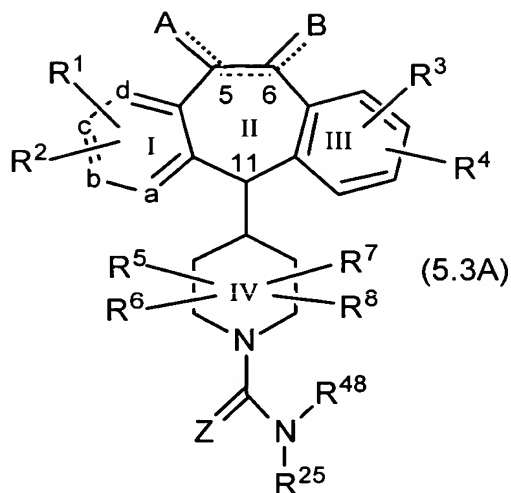
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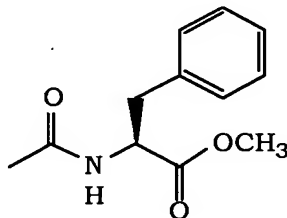


or

or a pharmaceutically acceptable salt or solvate thereof, wherein :

one of a, b, c and d represents N or NR<sup>9</sup> wherein R<sup>9</sup> is O<sup>-</sup>, -CH<sub>3</sub> or -(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>H wherein n is 1 to 3, and the remaining a, b, c and d groups represent CR<sup>1</sup> or CR<sup>2</sup>; or

each of a, b, c, and d are independently selected from CR<sup>1</sup> or CR<sup>2</sup>; each R<sup>1</sup> and each R<sup>2</sup> is independently selected from H, halo, -CF<sub>3</sub>, -OR<sup>10</sup>, -COR<sup>10</sup>, -SR<sup>10</sup>, -S(O)<sub>t</sub>R<sup>11</sup> (wherein t is 0, 1 or 2), -SCN, -N(R<sup>10</sup>)<sub>2</sub>, -NO<sub>2</sub>, -OC(O)R<sup>10</sup>, -CO<sub>2</sub>R<sup>10</sup>, -OCO<sub>2</sub>R<sup>11</sup>, -CN, -NHC(O)R<sup>10</sup>, -NHCO<sub>2</sub>R<sup>10</sup>, -CONHR<sup>10</sup>, -CONHCH<sub>2</sub>CH<sub>2</sub>OH, -NR<sup>10</sup>COOR<sup>11</sup>, -SR<sup>11</sup>C(O)OR<sup>11</sup>,



-SR<sup>11</sup>N(R<sup>75</sup>)<sub>2</sub> (wherein each R<sup>75</sup> is independently selected from H and -C(O)OR<sup>11</sup>), benzotriazol-1-yloxy, tetrazol-5-ylthio, or substituted tetrazol-5-ylthio, alkynyl, alkenyl or alkyl, said alkyl or alkenyl group optionally being substituted with halo, -OR<sup>10</sup> or -CO<sub>2</sub>R<sup>10</sup>;

R<sup>3</sup> and R<sup>4</sup> are the same or different and each independently represents H, any of the substituents of R<sup>1</sup> and R<sup>2</sup>, or R<sup>3</sup> and R<sup>4</sup> taken together represent a saturated or unsaturated C<sub>5</sub>-C<sub>7</sub> fused ring to the benzene ring;

R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> each independently represents H, -CF<sub>3</sub>, -COR<sup>10</sup>, alkyl or aryl, said alkyl or aryl optionally being substituted with -OR<sup>10</sup>,

-SR<sup>10</sup>, -S(O)<sub>i</sub>R<sup>11</sup>, -NR<sup>10</sup>COOR<sup>11</sup>, -N(R<sup>10</sup>)<sub>2</sub>, -NO<sub>2</sub>, -COR<sup>10</sup>, -OCOR<sup>10</sup>, -OCO<sub>2</sub>R<sup>11</sup>, -CO<sub>2</sub>R<sup>10</sup>, OPO<sub>3</sub>R<sup>10</sup> or one of R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> can be taken in combination with R<sup>40</sup> as defined below to represent -(CH<sub>2</sub>)<sub>r</sub>- wherein r is 1 to 4 which can be substituted with lower alkyl, lower alkoxy, -CF<sub>3</sub> or aryl, or R<sup>5</sup> is combined with R<sup>6</sup> to represent =O or =S and/or R<sup>7</sup> is combined with R<sup>8</sup> to represent =O or =S;

R<sup>10</sup> represents H, alkyl, aryl, or aralkyl;

R<sup>11</sup> represents alkyl or aryl;

X represents N, CH or C, which C may contain an optional double bond, represented by the dotted line, to carbon atom 11;

the dotted line between carbon atoms 5 and 6 represents an optional double bond, such that when a double bond is present, A and B independently represent -R<sup>10</sup>, halo, -OR<sup>11</sup>, -OCO<sub>2</sub>R<sup>11</sup> or -OC(O)R<sup>10</sup>, and when no double bond is present between carbon atoms 5 and 6, A and B each independently represent H<sub>2</sub>, -(OR<sup>11</sup>)<sub>2</sub>; H and halo, dihalo, alkyl and H, (alkyl)<sub>2</sub>, -H and -OC(O)R<sup>10</sup>, H and -OR<sup>10</sup>, =O, aryl and H, =NOR<sup>10</sup> or -O-(CH<sub>2</sub>)<sub>p</sub>-O- wherein p is 2, 3 or 4;

R<sup>20</sup>, R<sup>21</sup> and R<sup>46</sup> are each independently selected from the group consisting of:

- (1) H;
- (2) -(CH<sub>2</sub>)<sub>q</sub>SC(O)CH<sub>3</sub> wherein q is 1 to 3;
- (3) -(CH<sub>2</sub>)<sub>q</sub>OSO<sub>2</sub>CH<sub>3</sub> wherein q is 1 to 3;
- (4) -OH;
- (5) -CS(CH<sub>2</sub>)<sub>w</sub>(substituted phenyl) wherein w is 1 to 3 and the substituents on said substituted phenyl group are the same substituents as described below for said substituted phenyl;

(6) -NH<sub>2</sub>;

(7) -NHCBZ;

(8) -NHC(O)OR<sup>22</sup> wherein R<sup>22</sup> is an alkyl group having from 1 to 5 carbon atoms, or R<sup>22</sup> represents phenyl substituted with 1 to 3 alkyl groups;

(9) alkyl;

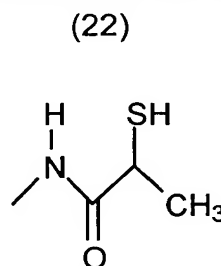
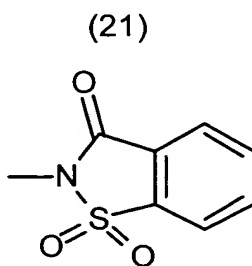
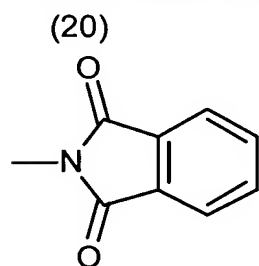
(10) -(CH<sub>2</sub>)<sub>k</sub>phenyl wherein k is 1 to 6;

(11) phenyl;

(12) substituted phenyl wherein the substituents are selected from the group consisting of: halo, NO<sub>2</sub>, -OH, -OCH<sub>3</sub>, -NH<sub>2</sub>, -NHR<sup>22</sup>, -N(R<sup>22</sup>)<sub>2</sub>,

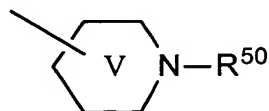
alkyl,  $-O(CH_2)_t$ phenyl (wherein t is from 1 to 3), and  $-O(CH_2)_t$ substituted phenyl (wherein t is from 1 to 3);

- (13) naphthyl;
- (14) substituted naphthyl, wherein the substituents are as defined for substituted phenyl above;
- (15) bridged polycyclic hydrocarbons having from 5 to 10 carbon atoms;
- (16) cycloalkyl having from 5 to 7 carbon atoms;
- (17) heteroaryl;
- (18) hydroxyalkyl;
- (19) substituted pyridyl or substituted pyridyl N-oxide wherein the substituents are selected from methylpyridyl, morpholinyl, imidazolyl, 1-piperidinyl, 1-(4-methylpiperazinyl),  $-S(O)_tR^{11}$ , or any of the substituents given above for said substituted phenyl, and said substituents are bound to a ring carbon by replacement of the hydrogen bound to said carbon;



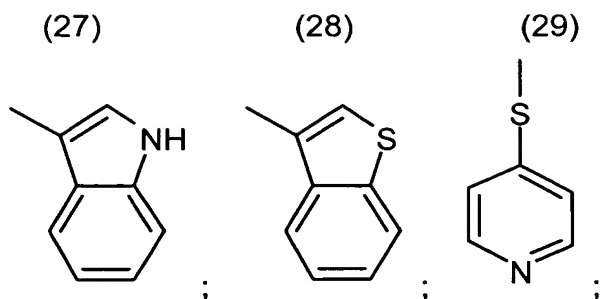
- (23)  $-NHC(O)-(CH_2)_k$ -phenyl or  $-NH(O)-(CH_2)_k$ -substituted phenyl, wherein said k is as defined above;

- (24) piperidine Ring V:



wherein  $R^{50}$  represents H, alkyl, alkylcarbonyl, alkyloxycarbonyl, haloalkyl, or  $-C(O)NH(R^{10})$  wherein  $R^{10}$  is H or alkyl;

- (25)  $-NHC(O)CH_2C_6H_5$  or  $-NHC(O)CH_2$ -substituted- $C_6H_5$ ;
- (26)  $-NHC(O)OC_6H_5$ ;



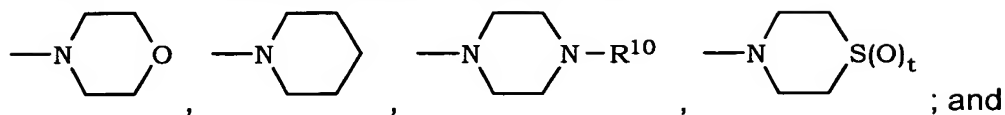
(30) -OC(O)-heteroaryl;

(31) -O-alkyl; and

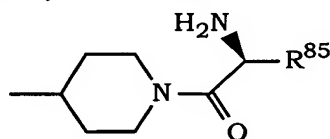
(32) -CF<sub>3</sub>;

(33) -CN;

(34) a heterocycloalkyl group of the formula



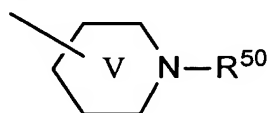
(35) a piperidinyl group of the formula



wherein R<sup>85</sup> is H, alkyl, or alkyl substituted by -OH or -SCH<sub>3</sub>; or

R<sup>20</sup> and R<sup>21</sup> taken together form a =O group and the remaining R<sup>46</sup> is as defined above; or

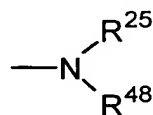
Two of R<sup>20</sup>, R<sup>21</sup> and R<sup>46</sup> taken together form piperidine Ring V



wherein R<sup>50</sup> is as defined above;

with the proviso that R<sup>46</sup>, R<sup>20</sup> and R<sup>21</sup> are selected such that the carbon atom to which they are bound does not contain more than one heteroatom;

R<sup>44</sup> represents



wherein R<sup>25</sup> represents heteroaryl, N-methylpiperidinyl or aryl; and R<sup>48</sup> represents H or alkyl;

Z represents O or S; and

A:

[illegible]